

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of)	
)	
Wireless E911 Location Accuracy Requirements)	PS Docket No. 07-114
)	
Revision of the Commission's Rules to Ensure)	CC Docket No. 94-102
Compatibility with Enhanced 911 Emergency)	
Calling Systems)	
)	
Association of Public-Safety Communications)	
Officials-International, Inc. Request for)	
Declaratory Ruling)	
)	
911 Requirements for IP-Enabled Service Providers)	WC Docket No. 05-196
)	

**COMMENTS OF ORANGE COUNTY 9-1-1 ADMINISTRATION,
PUBLIC SAFETY COMMUNICATIONS DIVISION, ORANGE COUNTY, FLORIDA**

I. INTRODUCTION

Orange County 9-1-1 Administration, a division of the Orange Public Safety Communications Division, provides these brief comments regarding the above captioned matters addressed in the Notice of Proposed Rulemaking, FCC 07-108, adopted by the Commission on May 31, 2007. These comments pertain to Section III.A, with a submission due date announced in the Federal Register of July 5, 2007.

II. DISCUSSION

- A. More Than 56% of Orange County 9-1-1 Calls are Wireless** – Located in Orange County, Florida, the Orlando area is the number one tourist destination in the world and host to millions of visitors annually. Visitors are less likely than local residents to know their precise location and more likely to place a 9-1-1 call from their wireless phone. During 2006, 56% of the more than one million 9-1-1 calls answered in Orange County came from wireless phones. These local factors render E9-1-1 wireless location accuracy especially important to our local PSAPs.
- B. Accurate Wireless Location Technology at the PSAP Level is Vital to Public Safety** – Amazing rescues of people, who do not know their actual location, are being facilitated by Phase II technology. In June of 2007, assailants left their victim stranded in a remote wooded area. Having wandered through the woods for 9 hours, he called 9-1-1 on his cell phone. Within 30 minutes, an Orange County 9-1-1 call-taker successfully directed the caller's path through the darkness to waiting rescuers. This success story was accomplished through a series of re-bids to determine the caller's changing XY coordinates on the PSAPs mapping system.

Had the location accuracy of the caller's wireless service provider (WSP) been unreliable or non-existent, his rescue could have required far more time and resources. Suppose the scenario described above involved an assault victim unable to walk, and rescuers needed to reach him immediately to save his life. Knowledge of the accuracy track record and technology type of the caller's WSP at the PSAP level would constitute vital information in developing the tactical search to save his life. This fact is the most compelling reason that WSPs should not be allowed to average their E9-1-1 location accuracy over a large geographic area. PSAP dispatchers need to know the expected reliability of the XY coordinates they are receiving. Beyond the expectation that 95% of wireless E9-1-1 calls should provide XY coordinates, how accurate are those coordinates? This information can only be achieved through credible local (PSAP-level) location accuracy testing.

C. Rural PSAP Location Technology is Extremely Important to the Public – For the most part, Orange County, Florida, is an urban area. However, most drivers eventually travel through vulnerable rural areas in transit to distant destinations. Reliable wireless location accuracy in rural areas is critical to the safety of every citizen. Allowing WSPs to average location accuracy performance over large areas creates a public safety disadvantage to all, as under performing rural areas may not receive the level of service that public safety agencies need to rapidly locate callers, who may be imperiled in a remote area. It is important that the FCC rule in favor of APCO's request for enforcement of PSAP-level E9-1-1 wireless location accuracy.

D. Clarify Section 20.18(h) to Require Phase II Location Accuracy Tests at the PSAP Level – During the spring of 2006, Orange County 9-1-1 Administration conducted its own independent E9-1-1 wireless location accuracy test. Using the FCC OET-71, Guidelines for Testing and Verifying the Accuracy of Wireless E9-1-1 Location Systems, 203 test sites throughout Orange County were randomly generated by computer. At each site, 9-1-1 calls were placed for each of the county's five local WSPs (two network-based and three handset-based systems). Up to three timed re-bids, for automatic location information (ALI), were used to generate XY coordinates. The actual GIS-generated XY coordinates were automatically recorded for each test site and compared to the PSAP's resultant ALI XY coordinates from each test call. The test examined the percentage of calls transmitting Phase II coordinates and whether the accuracy of the Phase II call coordinates met the FCC's established requirements. The statistical analysis computed pair indices relative to 90% confidence. The test was conducted using the same methodology as APCO's PROJECT LOCATE. Test results were surprising.

Local WSPs	Phase II Calls as Percentage of All Calls Placed to the PSAP	Phase II Calls as Percentage of All Calls Delivered to the PSAP
WSP A	31.53%	39.02%
WSP B	75.37%	91.07%
WSP C	76.85%	91.76%
WSP D	79.80%	97.01%
WSP E	82.27%	97.66%

Only two of the five local WSPs achieved location accuracy in compliance with the FCC's requirements (67% and 95% indices) for Phase II calls actually delivered. None managed to meet the requirement that 95% of all calls placed must provide XY coordinates.

Local WSPs	Location Technology Type	Compliance with FCC Location Accuracy Requirements for Phase II Calls Actually Delivered
WSP A	Handset-based GPS	In compliance
WSP B	Handset- based GPS	Not in compliance
WSP C	Network-based triangulation	In compliance
WSP D	Handset- based GPS	Not in compliance
WSP E	Network-based triangulation	Not in compliance

Without independent testing, the local location accuracy performance of each WSP may remain unknown to the FCC and local PSAPs. These test results produced a graphic depiction for each WSP of areas in which cell phone coverage and/or location accuracy were weakest. This identified specific points for discussions between Orange County 9-1-1 Administration and local WSPs about improving wireless coverage within the county. It also provided information Orange County could use to spot test trouble areas in the future, thereby monitoring the actual progress of WSPs in improving their performance between subsequent tests. Only PSAP-level testing can identify local improvements that need to be made to public safety.

- E. Deferring FCC Enforcement of Section 20.18(h) at the PSAP-Level Conflicts with the Public's Best Interest** – The FCC did not intend for an accountability loophole to surface in its efforts to make the public safer. Many wireless customers have purchased cell phones as a personal safety measure. Most remain largely unaware of potential location technology problems that may occur when calling 9-1-1 from a cell phone. In Florida, these same consumers are paying monthly charges to WSPs to specifically defray the cost of government regulation without actually receiving the public safety benefit of the regulation the FCC seeks to establish and enforce for their protection. It is important that the FCC continue its efforts to protect the public by deferring enforcement of Section 20.18(h) at the PSAP level temporarily and as briefly as possible.
- F. Require Compliance Testing Every Two Years** – As demonstrated in the rescue scenario described above, PSAP dispatchers need to know the accuracy confidence level of the location technology being provided by each WSP. After WSPs are in compliance with the FCC's standards, testing at the PSAP level should be conducted every two years to ensure that new equipment and technology are performing properly. WSP startups should be independently tested when Phase II is fully deployed. The FCC should ensure that location accuracy tests are made available to local PSAPs.
- G. Brief Suggestions for Resolving Location Accuracy Technology Shortcomings** – The Commission's commitment to expedite the resolution of problems cited in Section III.B, NPRM FCC 07-108, is promising. In working through issues addressed in this NPRM, timelines for completion of recommended improvements and well-defined systems of performance accountability are in the public's best interest. The credibility of wireless and

VoIP location accuracy test results should be thoroughly defined. Alternative technologies should be investigated. Although topographic obstacles obviously need to be taken into consideration, in so doing, the high standards previously set by Section 20.18(h) should not be totally abandoned in areas where such obstacles do not exist for the sake of standardization.

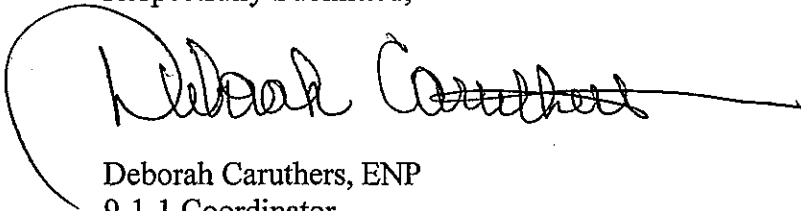
Consumers deserve the right to know the local accuracy level of their WSP's E9-1-1 location technology communities. Making this information public would most likely interject a high level of competition among WSPs that would ultimately improve E-9-1-1 location accuracy as a sound business strategy. In addition, making this information public could help drive much-needed competitive innovation in this technology arena.

III. CONCLUSION

I strongly support Chairman Martin's vision for overcoming the shortcomings of wireless location technology and the resolving the problem of locating nomadic VoIP customers. I look forward to participating in that collaborative effort.

I urge Commissioners to rule in favor of APCO's petition to provide PSAPs with credible PSAP-level wireless E9-1-1 location accuracy data, upon request, to satisfy the PSAPs need to know accuracy levels in responding appropriately to wireless emergency calls. The FCC should require WSPs to test their location accuracy performance at the PSAP level every two years. WSP accountability would be well served, if the FCC mandated independent testing and the publication of the results of those tests.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Deborah Caruthers", with a long horizontal line extending to the right.

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